



# ***THE B&O MODELER***

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**Cover Photos – Top, C-26 Caboose – Jeff Hanke photo. Middle, A-18cd Coach – Bob Chapman photo. Bottom, M-13a Boxcar – Bruce Griffin photo.**

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## **AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY**

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 registered members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their

purpose is to make otherwise unobtainable data available to the membership at reasonable cost. Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of annual memberships are available, Regular memberships are only \$35.00. If you would like to join, visit the website, <http://borhs.org/Membership/Registration.htm> to fill out a membership application, print a copy and mail it to:

**B&ORRHS  
ATTN: Membership  
P.O. Box 24068  
Baltimore, MD 21227-0568**

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## FROM THE ASSOCIATE EDITOR OF THE SENTINEL

### It's Easier Now.

The first thing I ever built in HO to reflect my B&O interests was an I-1 (or was it an I-5? The memory fails) caboose. It was scaled down from one of Mel Thornburgh's articles about building O scale B&O equipment, in *Model Railroader* in 1954. Where he used tinplate, I had wood handy. Where his drawings were wrong, my model is (yes, I still run it). The distinctive B&O twist to the right at the top of the ladder wasn't there, so it isn't there.

Also not there were either Bob Hubler's or Dwight Jones' books analyzing B&O cabooses in all their glory, all their variations, with lots of pictures and drawings to help get the dimensions and the appliances right. A lot of faking it went on.

Remember the MR "Dollar Car" series by Eric Stevens? Ever try to follow his methods and build an M-53 using string for the framing pieces? No, I didn't try to build that one; wrong scale at the time.

How about Thornburgh's numerous B&O steam locomotives? They were an MR staple in the '40s and '50s.

BUT: That was about all there was.

No books full of caboose data. No books showing freight car paint schemes. No Internet Web links to Chris Barkan's study of lettering styles through the years.

No Society freight car consist books to get the numbers and eras right. No scads of data from Ben Hom about B&O hopper cars, enough that you ought to be able to build most any class.

No brass car sides that can be overlaid on cheap plastic bodies to create reasonable facsimiles of B&O

limiteds. No Bob Chapman articles about superdetailing them, nor Bruce Elliott discussions along the same lines.

The kits are better now. Get your Westerfields while you can. M-26s, however, we'll probably always have with us. There are flatcars to be had, several versions of wagontop boxcars, a similar covered hopper.

And some of us still scratchbuild or kitbash things to come closer to what we think a particular piece of B&O equipment or infrastructure should look like.

Point is, the past 20-30 years have seen a small explosion in the amount of material available to anyone diligent enough to do a bit of research in order to build a good model. The B&ORRHS has reprints of the *Summaries of Equipment*, and as Nick Fry whips the archives into line more information is turning up. The books — specific about steam or diesel power, or freight equipment colors, or cabooses, or just lots of good pictures along the right of way — are there for the buying and reading.

And the Internet, Lord knows, may be the current Greatest Thing Since Sliced Bread for the devoted modeler. You can turn up people, kits, parts — all sorts of useful things.

The material's out there to use to build good B&O models, if you dig a little bit.

It's easier now.

*Harry Meem*



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## MODEL PRODUCT NEWS

EDITOR NEEDED

### HO Scale

**Chessie System Historical Society (Wright Trak) C-26 Caboose,**

[www.ChessieSystem.org](http://www.ChessieSystem.org)



Greg Stevens Photograph

The Chessie System Historical Society (CSHS) resin kit features a one piece resin carbody, correct diagonal panel galvanized steel roof, laser cut windows, etched metal end railings and steps, separately applied detail parts (brake parts, smoke jack, etc.), Atlas roller bearing caboose trucks with metal wheels and though couplers are NOT included, Kadee #78 are a perfect fit. Custom Microscale decal sets for the Chessie System paint scheme, created from actual paint diagrams, are available separately at \$3.00 a set (Decals for the original blue B&O scheme, numerous Safety caboose schemes and the Careful Car Handling schemes are available from Herald King at [www.heraldkingdecals.com](http://www.heraldkingdecals.com)). Kits are priced at \$55 for members and \$60 for non-members of the Chessie System Historical Society, plus approximately \$6 for up to 3 kits and \$1 for each additional kit for shipping. To order send an email to [CSHSCompanyStore@aol.com](mailto:CSHSCompanyStore@aol.com) or call (513)-779-3952.

### **Chessie System Historical Society, (Atlas) GP-40-2,**

[www.ChessieSystem.org](http://www.ChessieSystem.org)

The Chessie System Historical Society will soon be offering two exclusive runs of the newly produced Atlas GP40-2 locomotive in HO scale. These will be models painted in the standard Chessie System scheme, but with no unit numbers or reporting marks below the cab to allow modelers to use decals to create a specific unit. In addition, the CSHS will produce an exclusive model of B&O 4127, one of the original group of GP40-2's, delivered in Chessie paint, but with larger than normal reporting marks on the cab. Only unit numbers 4101-4131 carried these oversize initials. The models are scheduled for delivery by March 2009 and the CSHS is taking preorders for the model currently. They are a very limited run, so please order now to ensure you get one.

## Westerfield B&O Ice Car

[www.westerfield.biz](http://www.westerfield.biz)



These former PRR R-7 reefers were built between 1913 and 1915 and later leased to the Fruit Growers Express. In 1951 at least two of these cars ended up on the B&O in Company Ice Service. The kit features a one piece body and custom decals. It can be ordered direct from the website.

## MJB Models, Ilchester Station

<http://mjbmodels.com/>



The limited run production for the Ilchester, MD Station is scheduled for the middle of March. Order slips for those who reserved their kit online will be mailed the end of March. Shipping is \$8.50 within Continental US, for orders outside of the continental US, costs will be determined. MJB Models will be at the Timonium Scale Show in April also. Please reserve by e-mail at [mjbmodels@verizon.net](mailto:mjbmodels@verizon.net)



## S Scale

Smoky Mountain Model Works, Inc.

[www.smokymountainmodelworks.com](http://www.smokymountainmodelworks.com)

Two planned releases for this year include M-53 boxcar with 2 doors styles and decals to replicate at least two paint schemes. The second release will be a I-5c/d caboose. Both will feature one-piece bodies. Reserve these kits on the website.

## O Scale

### C-17 Express Car



<http://www.modelengineers.com/oscale/cars.html>

The Baltimore O Scale Society, LLC, co-sponsor with the Baltimore Society of Model Engineers of the 2009 O Scale Convention, is proud to announce the availability for immediate shipment the 2009 O Scale National Convention Cars. These highly detailed "Troop Trains" express cars are available in three different numbers for the prototype roadnames. The cars are available in 2-rail or 3-rail with identical, highly detailed bodies, underframes and trucks - the only differences are the wheels and couplers. The Baltimore & Ohio express car paint scheme is blue with gold lettering; the other available car is the green Railway Express Agency Red Diamond car. Built by Weaver Models and offered for the first time in these variations **available exclusively** through the Baltimore O Scale Society, LLC. You do not need to attend the convention to purchase these cars. Order now using the [Convention Car Order Form](#).

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## UPDATES AND ERRATA

### **2009 O Scale National Convention**

June 18-20, 2009.

Website: <http://www.oscaleeast.com>

Location: Baltimore (Towson), Maryland, Towson University Student Union, 8000 York Road.

Sponsored by The Baltimore O Scale Society in conjunction with the Baltimore Society of Model Engineers.

The O Scale National Convention includes 3-rail scale modelers, narrow gauge, trolley and other renditions of O Scale railroading. If you are modeling in another scale, but have been wondering about 2-rail O scale, please join us! The vendor tables, displays and clinics will be full of 2 rail equipment, so it is a good time to experience and learn of the appeal of O scale.

We will have use of the Student Union Building at Towson University, providing a spacious venue for vendor halls, displays, clinics, model contests, dining, and informal chats. Layout tours are planned for the evenings, as well as before and after the convention. The vendors, displays, clinics, and model contest will run from 9-5 Th/F, and 9-12 on Saturday. The convention costs are: \$45 for 18-20, or \$25/day Thursday or Friday, \$10/day for Saturday. Late registration fee of \$5 after May 1, 2009.

On campus housing will be available at: \$104/per night for single occupancy and \$83/per night/per person for double occupancy. Included with your room price are three meals: dinner the day you arrive and breakfast and lunch the following day. Contact for more information about the event, [info@oscaleeast.com](mailto:info@oscaleeast.com)

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## MODEL PRODUCT REVIEWS

EDITOR NEEDED

### HO Scale

Chessie System Historical Society (Wright Trak) B&O C-26 Caboose

By Jeff Hanke. *Model photography by the author.*



### Introduction

Being a board member of the Chessie System Historical Society (CSHS), I was lucky enough to be chosen to build one of the first three test shots of the Society's latest project.

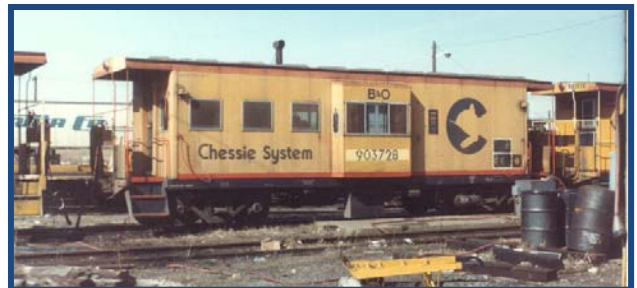
### The Prototype

Built by International Car Company in 1971, in two lots, the C-26 class came delivered in B&O blue with the Capitol Dome logo and yellow lettering. They were numbered C-3700 to C-3774 and C-3775 to C-3827. These were the last class of B&O caboose delivered with the Capitol Dome. They were also the first built without roof walks.

Being on property only one year before the first Chessie paint scheme appeared, many in the class would receive Chessie's yellow, vermillion and blue paint scheme. Four from the class (C-3714, C-3718, C-3771 and C-3774) would receive unique safety caboose paint schemes from March to May 1974. In 1982, the cabooses were renumbered from the C-3XXX series to the 903XXX series. Also in 1982, three more C26s were chosen for the only B&O cabooses to be painted into Chessie's "Careful Car Handling" paint scheme (903747, 903758 and 903820). Several cars of this class were also painted

in the early 1990's into the CSX gray and blue caboose paint scheme.

I chose to model B&O 903782, a caboose photographed in the as-delivered B&O blue paint scheme but renumbered (not repainted) in 1982 to the 903XXX series. Some of these cabooses got B&O lettering on the top of the bay window at renumbering, but this one did not. Some also were renumbered in yellow numbers, others in white. 903782 had white numbers applied. Another neat feature of the cabooses was that the Capitol Dome was a sticker, not paint. Over time the blue in the sticker faded and the Capitol Dome faded away to a yellow circle. 903782 showed some fading in the logo, and I tried to depict that on the car.



Dean Heacock Photograph.





### The Model

The Wright Trak kit is made of resin and comes with a one-piece car body with separate roof, frame, and details. Also included are Atlas roller bearing caboose trucks, window glazing, Tichy curved grab irons, hand grabs, wire for bending the L shaped grabs, and metal etchings (window frames, screens, etc.). Couplers are not included. The kit is crisply molded with only minimal flash to clean. I was pleasantly surprised by how easily the flash came off. The dry fit of the roof and frame to the body was nice and tight.

### Construction

The kit I built was a preproduction model, so no directions were yet written. This made it more challenging for me, but subsequent builds will have the benefit of directions (available with production kits now on sale).

I started by drilling all the holes for the grab irons. Next I removed the flash from the windows and cut out all the detail resin parts from the detail set. There is an angle that needs to be placed under each bay window, to fill in the side sill. I glued that in next. It took some filing to fit. I should have put the piece over the doors at this stage, but I didn't realize that

was what the two parts were for and left them off. I glued the roof to the body next.

Putting the body aside I prepped the frame for painting by adding the under body details and the steps. The steps are by far the hardest part of this kit, but after just two sets of them, I got the hang of their assembly. I put the end platform walkways on at this time too. I also primed all the grab irons and metal etchings with Testors DullCote.

After a quick wash in soapy water to remove any fingerprints or mold release, the kit was ready for painting. I painted it with Polly Scale Enchantment Blue, Tamiya Flat Silver and Polly Scale UP Armor Yellow.



After the paint was dry, I weathered the blue paint with lighter shades of blue. The real caboose showed streaking under the windows and along the seams. I also added some rust streaks from the roof. The roof was heavily weathered with rust colors, as seen on the prototypes.

I sprayed the model with Testors Glosscote in preparation for decaling. I used Herald King's C-560 B&O Caboose decals on the car. I used their C-145 Careful Car Handling Caboose set for the road numbers. The ACI labels are off Microscale's MC-4280 sheet. The lube stencils are from a Champ set, but any would do.



After decaling, I sealed the decals with Testors Dullcote and began the process of assembly. I added the grab irons, axle generator, brake stand and wheel, end railings and window frames. I added the trucks after tapping holes with a Kadee drill and 2-56 tap. They too were weathered. The couplers were Kadee #78s. These come preassembled in coupler boxes and the opening required a little sanding to get the boxes to fit in their proper spot. Remember that these couplers stuck out quite a bit from the end platform, so don't mount them flush to the end platforms. Finally, I added the window glazing, smoke stack and toilet vent.

I debated about adding the screens or not. They are nicely done, but I thought they would dominate the

model if added on all side windows. Instead, I decided to weather the screen part with black paint and add just the ones on the bay window. You can add them all if you wish.

### Final Thoughts

I was very pleased with my first resin kit. Wright Trak did a very good job working with us on getting the dimensions right. This kit fills a huge hole in B&O bay window kits on the market.

These test shots also gave us a head start in showing the rest of the modeling community what the C-26 looks like finished. They are available exclusively from the Chessie System Historical Society at [www.chessiesystem.org](http://www.chessiesystem.org).



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## MODELING B&O'S CLASS A-18CD MODERNIZED COACH

By: BOB CHAPMAN

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



### B&O Enters the Streamliner Age

Despite the severe financial pressure of the Great Depression, B&O was an aggressive pioneer in introducing the streamliner age to the traveling public. First came the two lightweight Royal Blue consists in 1935, soon banished to subsidiary Chicago & Alton by their rough riding qualities.

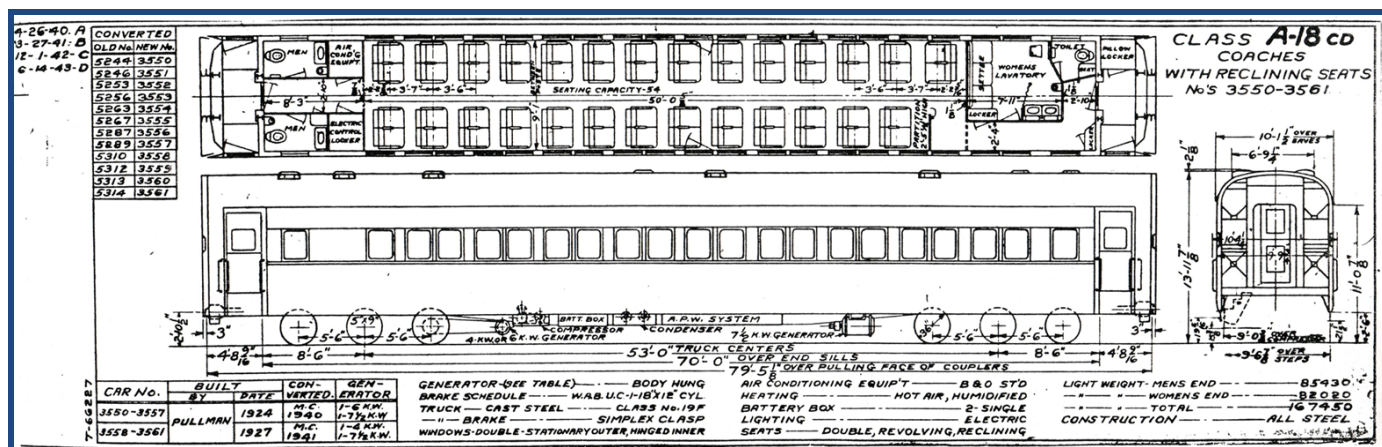
Replacing them in 1937 were trainsets comprised of existing heavyweights modernized in B&O's own Mt. Clare Shop under the direction of industrial designer Otto Kuhler; their improved ride confirmed B&O president Daniel Willard's belief that "nothing beats the riding quality of a 12-wheel heavyweight". Less visible was an economic advantage – a heavyweight could be modernized for 25 to 50 percent of the cost of a new lightweight car.

Soon to follow were similar modernized heavyweight consists for the all-Pullman New York-Chicago *Capitol Limited* in 1938, the New York-St. Louis *National Limited* in 1940, and the *Columbian* in 1941 – all led by new Class EA slant-nose diesels from Electro-Motive Corporation.

The modernized heavyweight cars in many respects matched the appearance of the newest lightweights. Sleek streamlined roofs replaced the old-style clerestory roofs, full-length skirting was added to conceal the underbody appurtenances and trucks, and full-width diaphragms gave the trainsets an attractive tubular appearance. On the interior, reclining seats replaced standard walkover coach seats in the attractively decorated carbodies, and air-conditioning was installed.

Completing the modernization was a new paint scheme. The sides were blue and the window panel gray. The black roof featured a gray stripe uniquely placed above the letterboard. Accenting the scheme were narrow imitation gold stripes above and below the windows, and imitation gold lettering. To the lay person, B&O's new streamliners were indistinguishable from the new lightweight consists; only their six-wheel trucks betrayed their origin.





## B&O's Class A-18cd Coaches

To complete its 1940 *National Limited* consist, B&O modernized eight coaches (#3550-3557) from cars in the #5200-#5300 series, Classes A-18c and A-18d. This initial fleet would be augmented with four additional identical coaches in 1941.

In addition to the general modernization applied to all cars of the new trainsets, the A-18cd's received a blanked window on each side directly opposite each other; one concealed an air-conditioning equipment room and the other an electrical locker. A vestibule door was blanked to provide space for a pillow locker. New reclining seats and enlarged lavatories reduced seating capacity from 80 to 54.

Following World War II, additional coaches were modernized by the B&O; interior modifications were highly similar to those applied to the A-18cd's, but except for the *Cincinnatian* consist, none received the degree of external streamlining of the A-18cd's. As these additional cars rolled out of Mt. Clare, they were assigned interchangeably with the A-18cd's, freeing the A-18cd's to appear in the consist of just about any of B&O's mainline passenger trains.

## Modeling the A-18cd

Until a few years ago, modeling the A-18cd in HO scale was a complex kitbash. Starting from the ubiquitous Rivarossi 12-1 Pullman sleeper, it was necessary to shorten the carbody by 4'1", relocate every window, and replace every door.

To the rescue in 2004 was the Walthers paired-window coach, based on the B&O Class A-18 as its prototype. While the Walthers coach represents a clerestory-roof car with few modernizing modifications, it can be readily kitbashed into a modernized heavyweight coach. Carbody length, window spacing, and underbody detail are already correct; all that is needed is replacing the roof, adding skirting, blanking two windows and a door, and adding a bit of detail.

The best starting point is an undecorated Walthers coach, catalog #10110. If unavailable, a decorated model can be substituted and stripped after disassembly. For those averse to doing a complete paint job, it is possible to kitbash a B&O-decorated model, but with the challenge of matching the Walthers blue and gray on the plated windows and door.

## Disassembling the Walthers Coach

Using the diagram in the kit instructions as a guide, disassemble the carbody. First, remove the roof, which is secured by tabs which interlock into the tops of the sides. I found that gently twisting the carbody would release some of the tabs, allowing access to pry loose the remaining tabs. It's not unusual to break a few tabs in this process — not a worry, since we will be replacing the Walther's roof with a new one.



The sides, ends, interior, and floor are attached to a styrene carbody core, and are easily removed. The diaphragms snap into the ends, and can be released by bending their tabs at top and bottom on each side. The windows are spot-glued, and can be released by gentle prying. The coupler mechanism and trucks are secured with screws and are easily removed. For now we'll leave all underbody detail in place, leaving a few modifications for later. Your carbody should now be reduced to a pile of its most elemental parts.

If your carbody was painted, now is a good time to strip the sides and ends; Scalecoat stripper worked well for this.

### **Blanking the Windows and Door**

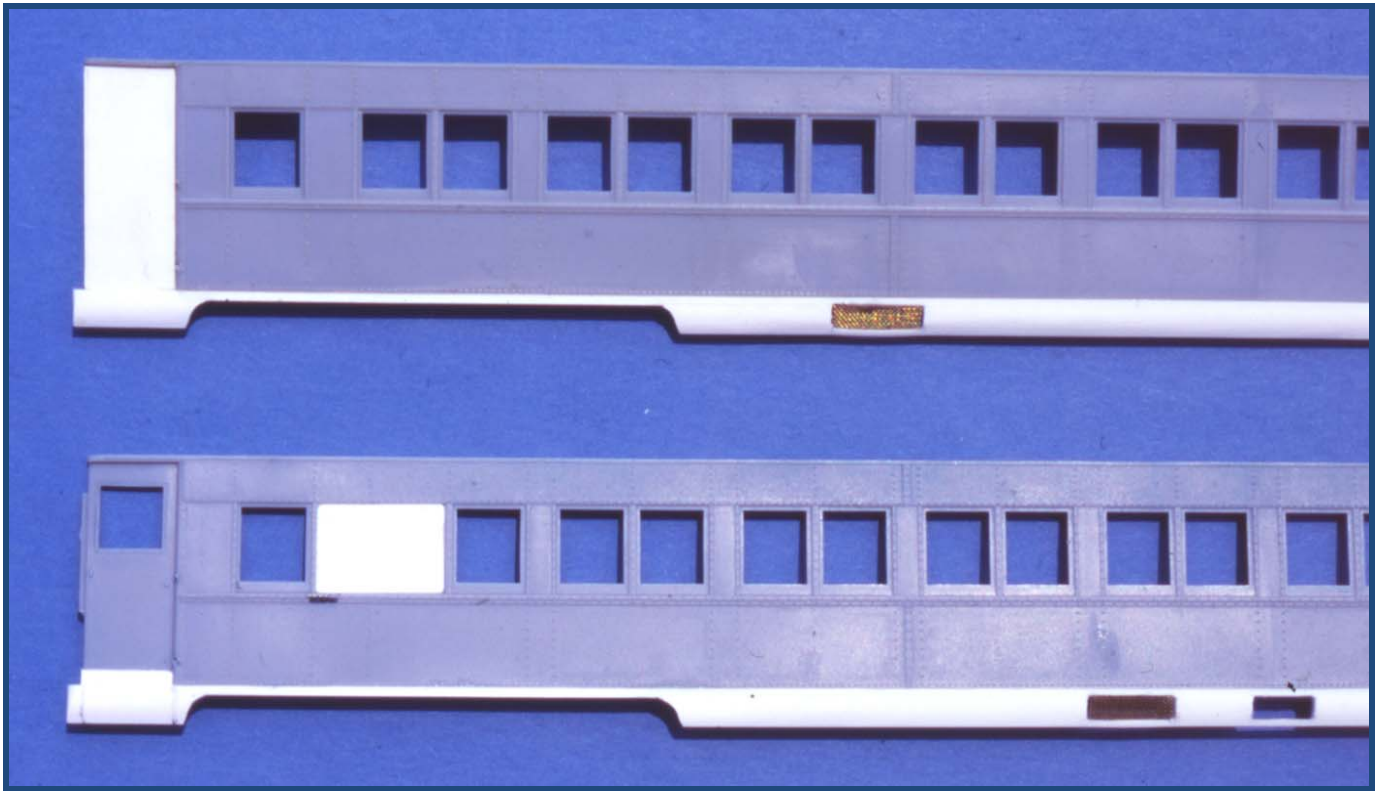
Begin by blanking two windows – the second window from the left on one side, and the second window from the right on the other. Note that these two windows are directly opposite each other on the assembled carbody. Using the photos as a guide,

carefully cut horizontally just below the letterboard and just above the belt rail; stop the cuts just outside the frame of the first window on each side.

A series of small holes drilled close to each other will help you start the vertical cut. File the opening so that it is perfectly flush with the bottom of the letterboard, the top of the belt rail, and the outer edge of the sash of window #1.

Cut away the left vestibule door from the side that has its blanked window near the right-hand end.

Replace the two windows and the door with tight-fitting panels of .080" styrene sheet; glue the panels such that their backs are flush with the backs of the sides. Add filler strips of .060" x .080" styrene under each of the three remaining vestibule doors; file their bottom edges flush with the bottom of the side.



### Adding the Skirts

In their initial modernization, the coaches received full-length skirting running the entire length of the carbody and concealing both the underbody equipment and trucks. About 1946, cutouts at the location of the trucks began to appear. By the late-1950s, many of the cars had lost their entire center section of skirting to facilitate maintenance of the underbody components.

While my model represents a car with truck cutouts common in the steam-diesel transition era, the following instructions can be easily adapted to model a full-skirted or skirtless car.

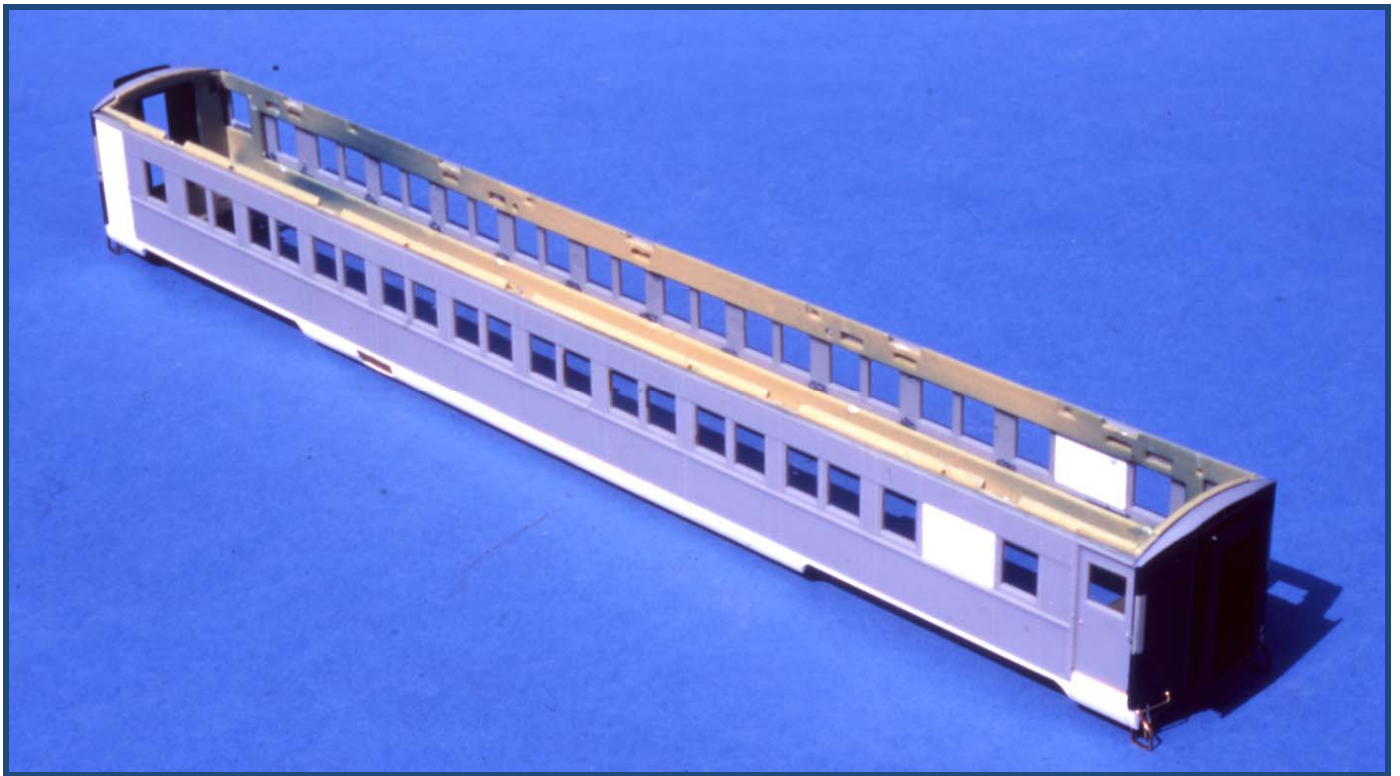
Begin by gluing a .040" x .060" styrene strip to the full length of the bottom of the side, placing the .040" dimension vertically; allow about 6" of extra material at each end to fit under the ends of the carbody. This strip will serve as the top of the truck cutouts.

Below this strip glue three strips of .060" x .125" styrene strip, the .125" dimension placed vertically. The two outer strips are 4'6" long, and run from the ends of the top strip to the truck cutout. The third strip is 39'0" long, and is centered in the middle of the carbody between the truck cutouts.

Using the photos as a guide, shape the ends of the three strips to form the curved edges of the truck cutouts; a convex oval needle file is handy for this. Then with a mill file, shape the three strips so that they form the exterior curve of the skirting which curves inward under the carbody.

I detailed the skirting by scribing the location of the retractable vestibule steps, cutting ventilating ports for each of the two air-conditioning condensers which I filled with fine-mesh screen, and cutting an access opening to the water tank shutoff valve.





### Reassemble the Carbody

The skirting on the model is thicker than the prototype, and will interfere with the location of several of the underbody boxes; remove and re-glue any that need repositioning. Glue the floor to the carbody core.

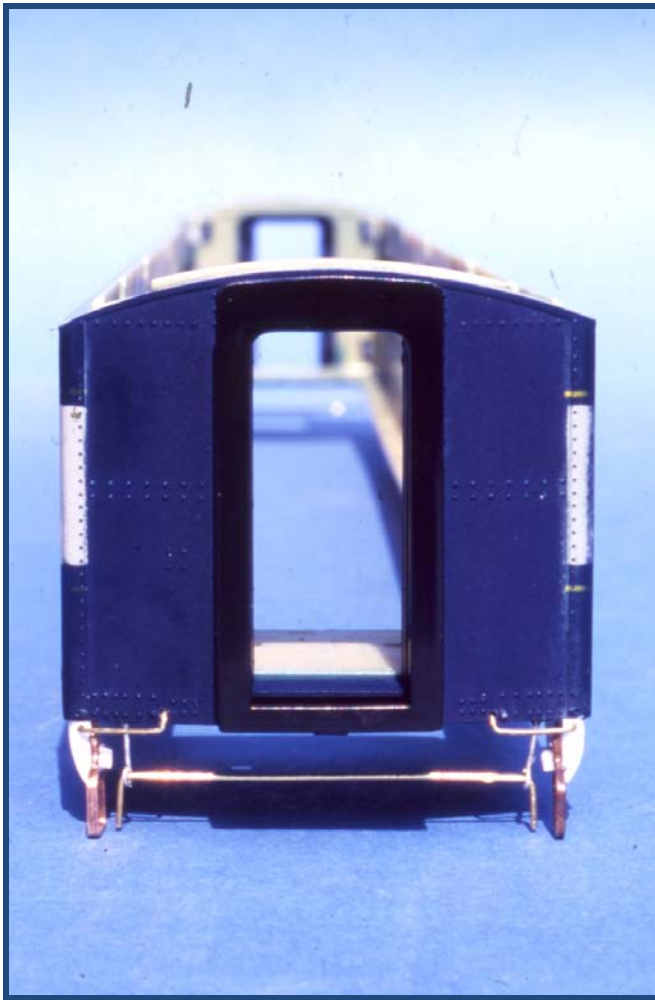
File away the roof locator ribs from atop the ends. Using the locator dimples as a guide, glue the sides and ends to the carbody core.

### End Details

Install Westerfield #1197 18" drop grabs at the bottom of the ends on each side of the diaphragm opening.

The uncoupling levers are suspended from Detail Associates #2222 long eyebolts; bend the uncoupling levers from .016" wire. Glue 1'0" sections of .040" x .040" styrene strip behind the skirting at each corner to provide mounting blocks for the stirrups. The stirrups are A-Line, with one extra bend allowing them to project beyond the end of the car and clear the retractable vestibule steps. The carbody is now ready for painting; we'll install the unpainted vestibule grabs after painting.





### **The Streamline Roof**

On the prototype, the streamline roof used the same carline framing as the original clerestory, resulting in a higher profile than the lightweight roof. Its ends were beveled to match the three planes of the original ends of the heavyweight.

The PRR heavyweight arch roof available from Bethlehem Car Works approximates the appearance of the B&O modernized heavyweight roof. Cut the roof to match the maximum length of the carbody, and cut away the lip which runs the length of the roof along each side.

The end caps are .080" styrene sheet, curved at their tops to nestle inside the BCW roof, and at their bottoms to match the curved upper contour of the Walther's car ends. For the top curve, file and fit until a match is achieved, and glue the ends to the roof.

When the glue is completely set, trace the curve of the Walther's end on the bottom of the end caps.

Using a convex file, file the bottom curve until it matches the Walther's curve.

With a mill file, bevel the outside of the end caps to match the three-plane bevel of the Walther's ends. Work carefully so that the seams between the three bevels will be vertical.

A removable roof will simplify painting and allow access to the interior. Using the hole molded near each bolster, a long screw can be fed upward through the carbody and into a strut glued near each end of the roof.

Cut two struts from .080" x .250" x 9'0" styrene strip, and glue them wedged between the sides of the roof; be sure and inset them sufficiently to clear the top lip of the carbody core. Since my 2-56 x 1" screws were too short to reach the strut, I glued a 4'0" length of 1/4" x 1/4" Plastruct square tubing to the bottom of each strut. Drill and tap the tubing, and test-fit the roof.

### **Roof Details**

The roof of the A-18cd literally bristles with vents – six on one side and five on the other. BCW's long Garland vents are a near-match to the prototype.

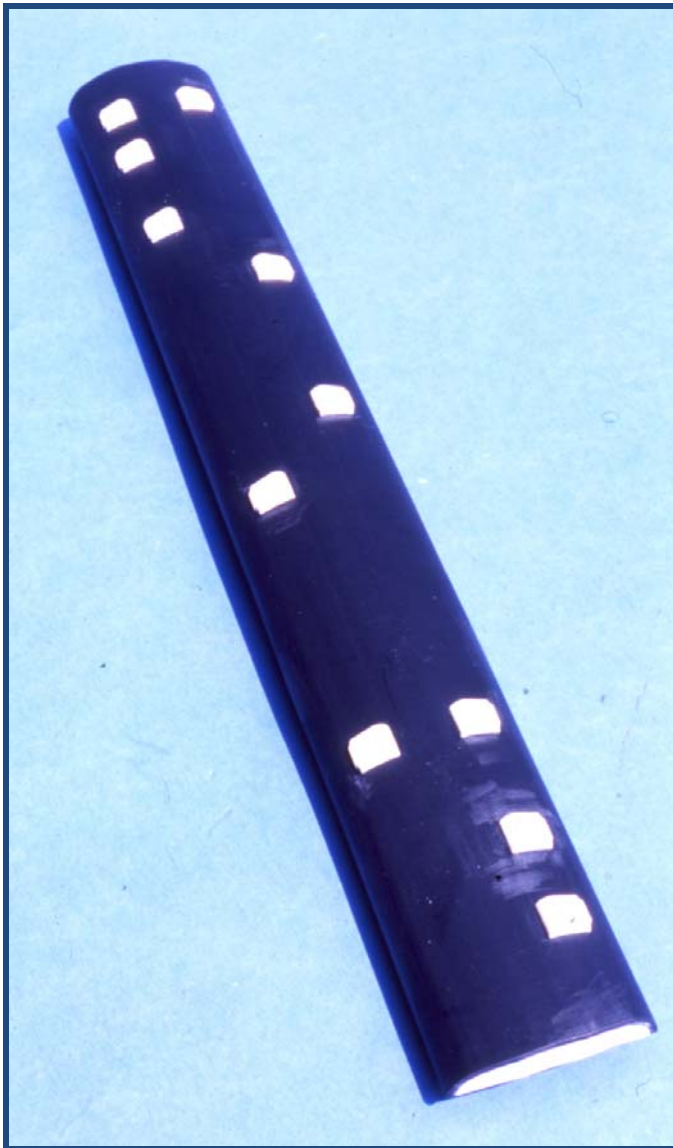
I estimated their spacing from diagrams and photos, with the following results (distances are measured from the left end of the roof to the left side of the vent):

Side with Blanked Door – 5'0", 9'9", 17'0" 40'6", 52'6", and 71'0"

Opposite Side – 17'0", 35'0", 58'9", 66'3", and 71'0"

Note that the first and last vents of the "opposite side" are directly opposite their counterparts.

The inner edge of each vent is located 1'6" from the roof centerline. As you glue the vents in place, a straightedge along their inner edges will help to assure that they form a straight row.



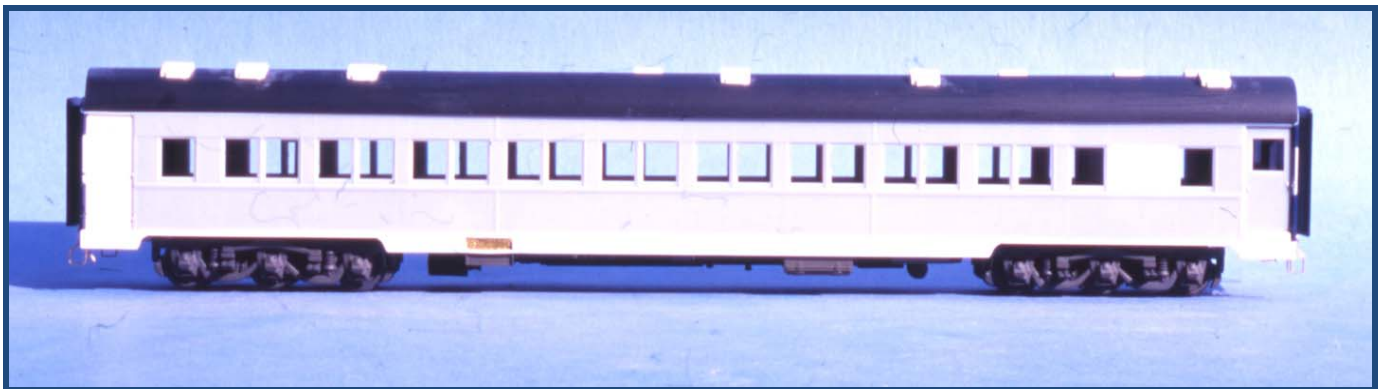
### Painting and Lettering

Painting and lettering is thoroughly covered in the article "Painting and Lettering B&O Passenger Car Models" in the July/August 2008 issue of *B&O Modeler*.

For the A-18cd, the gray window panel stripe should be painted to include both the batten strip above the windows and the belt rail below the windows, and should wrap around the ends of the carbody by about 9". I found it easiest to paint the blue first, then mask for the gray.

According to B&O paint diagrams, the roof was originally black, then blue in 1948, then returned to black in 1950. The 12" gray roof stripe was dropped in 1944 only to reappear with the blue roof in 1948, then eliminated for good in 1950. For my early 1950's model, I went with a black roof with no stripe.

Reinstall the Walthers windows, and add some gray shades (mine were cut from a gray file folder). Install interior, add the Walthers vestibule grabs at each vestibule door, mount the trucks, couplers, and diaphragms, and your A-18cd is ready to roll!





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# CONSTRUCTION OF THE HO WESTERFIELD M-13A BOXCAR KIT

BY: BRUCE GRIFFIN

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



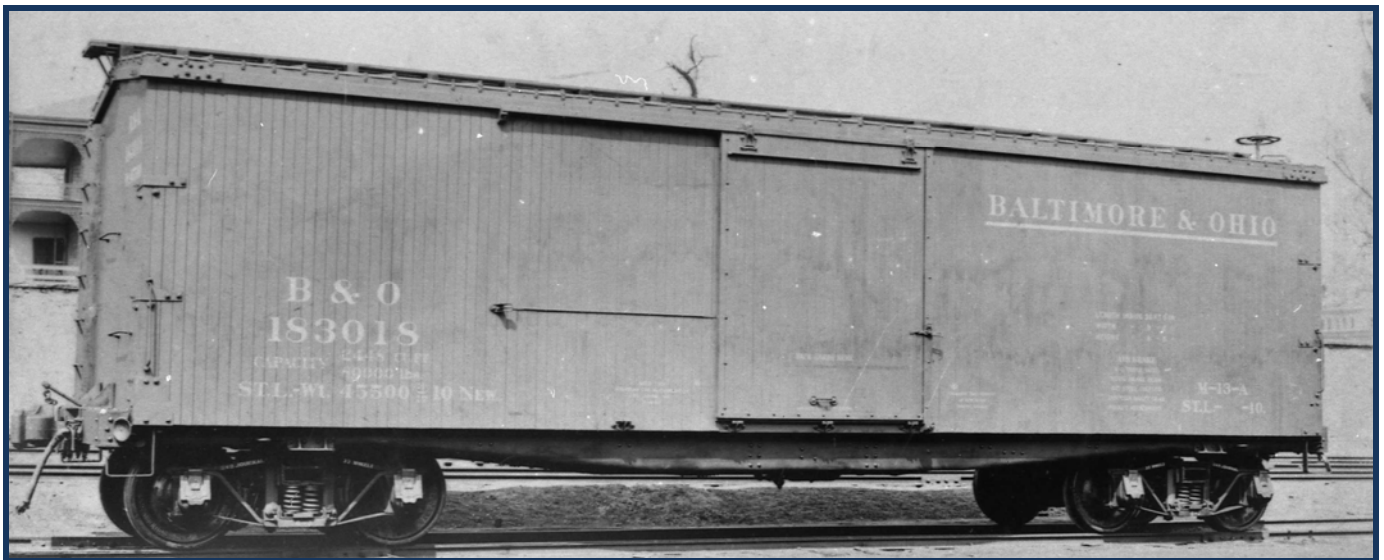
## Introduction

This article is the result of two efforts I was hoping to write about. The first was to build and review the Westerfield M-13a (item number #10951) that was introduced last year by Al Westerfield. I have enjoyed building several Westerfield kits and when I asked for photos and information about this kit for a review I was promptly sent photos (included in this article) and a copy of the well researched data sheet that comes with every kit. As one of the stated goals for *The B&O Modeler* is to promote manufacturers of quality B&O models, writing a review would serve that goal. After ordering and receiving the kit I was pleasantly surprised by the fact that it has a one-piece body. This greatly reduces construction time and makes the kit easier for a first time resin kit builder to complete with great results. I was planning on writing another article about building a resin kit for first time builders, so now I had a kit to use for that purpose. The P-24/25 flat car kit from ProtoWest was going to be my choice. I still want to write about that kit and modifications to make one of the cars in the kit into an auto/truck frame carrying class P-24b. I hope that

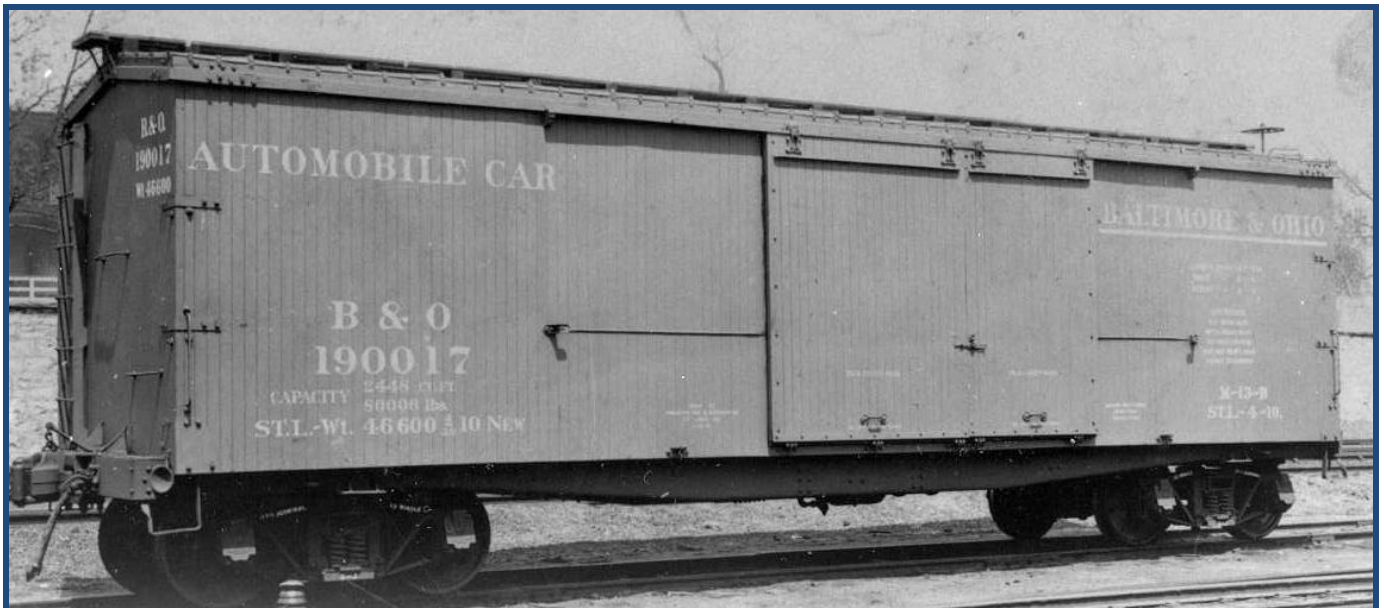
some folks who have not tried a resin kit will try this kit, the Proto West offering or a PMSS I-17 caboose and realize that they are not that difficult to build and offer many new models for their layouts. I am not an experienced resin kit builder (less than 30 kits), but am happy with my results, so I want to encourage others to give it a try. I am guessing that when more folks attempt resin kits we will all learn some new techniques from them.

## The Prototype

In 1905 and 1906, 2,000 M-13 boxcars were built for the B&O by two manufacturers. In 1910, 1,700 M-13a boxcars were built along with 300 M-13b auto boxcars. The auto boxcars had a second half size door to the right of the full size door. By 1922, all of the cars had additional safety appliances applied which included ladder grabs on the sides and corner roofwalk additions. Later these cars went through several rebuildings including conversion of 175 into I-16 cabooses during World War II.



Al Westerfield Collection



Al Westerfield Collection

### The Model

Opening the box one finds a one piece body and all the detail parts needed to create a great model. Things not usually included with resin kits, including this one, are trucks, couplers, and paint. Other than that, everything is in the box, including optional detail parts that make the kit stand out next to one of your older models from Athearn or MDC. The first thing I will say about this and any resin kit is to read the directions from beginning to end before starting. Many kit manufacturers do not include detailed instructions like those in a Westerfield kit, so this is a good reason to start with one of his kits. Have a pen in hand to make notes and underline things that seem especially important or unusual. One other thing I would offer to experienced builders and beginners alike is to order a copy of the *How-To* DVD or video

when you order your kit from Westerfield (<http://www.westerfield.biz/>). It's a bargain at \$3.00 (when ordered with a kit) and offers tips and detailed, visual instruction on constructing resin kits that will benefit anyone who builds resin kits.

### Construction

Again, the first thing in the construction process is to read the instructions from beginning to end and in this case also read the prototype information sheet to know which version you want to build. I am building an M-13a as it appeared in 1915 after the safety appliances were applied. Also remember that the detail photos in the instructions are also available on the Westerfield website. They can be downloaded and opened full screen with excellent resolution. This will help with the details.



## Body Details

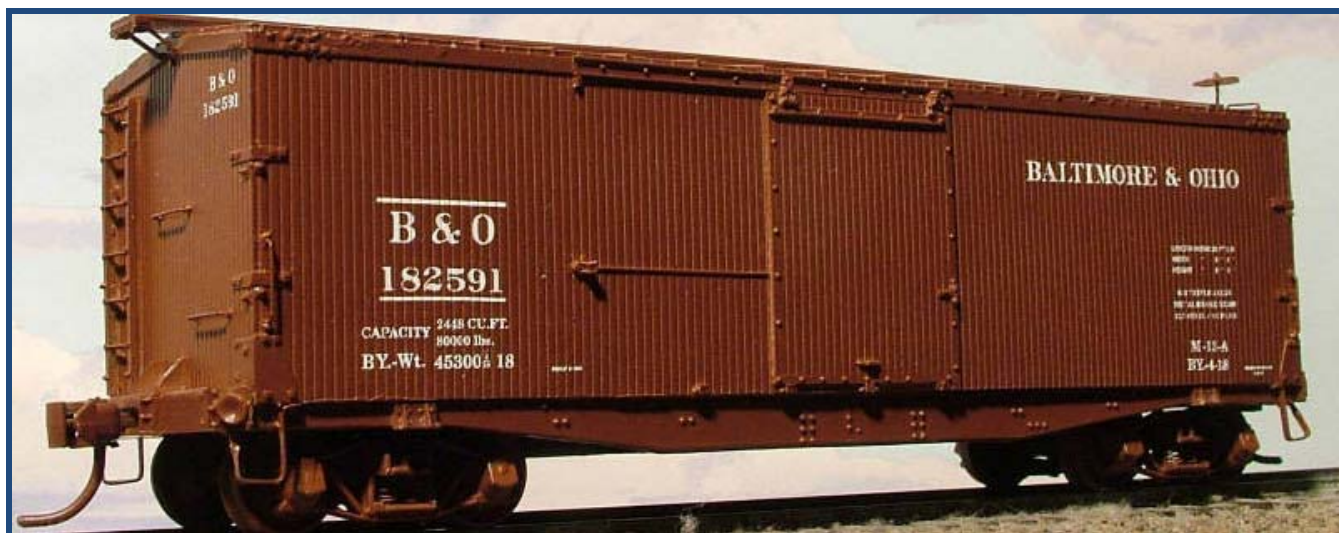
Adding the details to the car body is the first recommended step, so I drill #79 holes throughout the body for the various grab irons. Buy a ten pack of the drill bits as you will use them on your next resin kits and it is likely you will break one drilling the holes on your first model. If you are ambitious you could chuck the bit in your Dremel tool and get this done rather quickly. Place the bit in the starter hole before turning it on and you will have better success.

While I had my drilling equipment out, I drilled and tapped the truck mounting screw in the bolster. For the first time resin kit builder this is a critical step in creating a model that will operate on your layout. Many resin kit builders use a 2-56 screw to secure the trucks to their kits and I follow this norm. The easiest way to buy the needed tap and drill is to get the Kadee drill and tap set (part 246) from your hobby shop (this should only cost \$5.95). This is something you will use again and again. If you have never used a drill and tap to make a threaded hole don't be alarmed, it is very easy in the resin material. The Kadee kit has a tap, a tap drill, and a clearance drill. The tap drill is what you use in the bolster to prepare it for using the tap. The larger clearance drill can be used to create a hole that is large enough for the 2-56 screw to clear without interference. It could be used to make sure the hole in the trucks is large enough, but many commercial trucks are already drilled to this size. To tap the bolster, drill a hole perpendicular to the bolster using the tap drill (the smaller one) through the bolster. Next put the tap in your pin vise and make a few turns (clockwise) in the hole and then turn it back out. If you were tapping a hole in metal you would only turn it a quarter turn or so before backing it out and would need a lubricant,

but in resin just turn it a few turns before backing it out to clear the chips and repeat until you have run the tap all the way through the hole. (If you want to use a lubricant, try beeswax.) When you are done you can take a 2-56 screw and run it into the hole. Kadee has plastic and metal 2-56 screws that you can use for this purpose or you can go to a comprehensive hardware store and pick up a box of 2-56 by ½" screws that will last a lifetime for about the same cost.

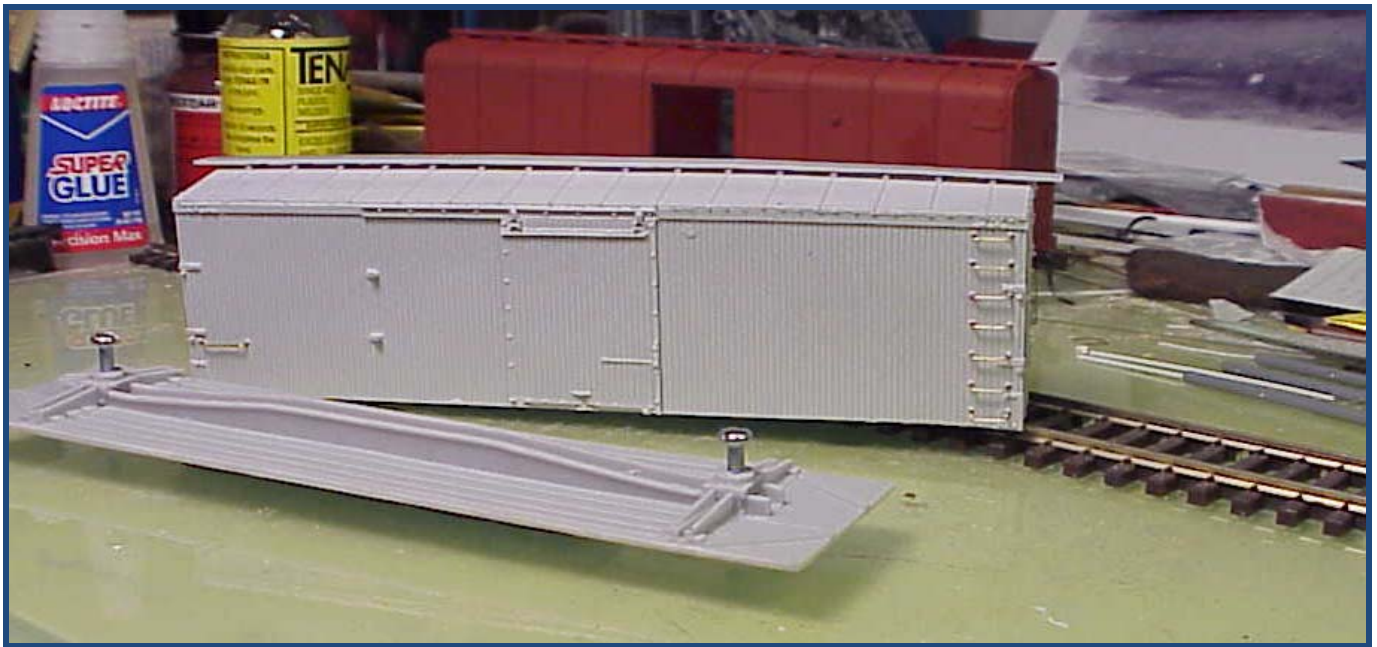
Unlike many resin kits this one comes with a steel weight. The problem is that it covers the truck screw holes and would require you to drill holes in it to clear the truck screws. I decided to use weights with double sided tape already attached instead of the supplied weight. The supplied weight is about 1 ounce, but I added 1 ¼ ounce of the stick on weights. Many choices are available, but this solution was easy and does not introduce solvent glues into the closed boxcar that might soften the resin in the future.

Next, STOP. The one thing that resin kits are known for is being tedious. They can be, but if you take your time, do a few things at a time well, you will end up with a great kit. Put the kit on one side of your workbench and work on a simpler kit or lay some track or other activity. One thing you can do at this point if you have not already done so is to wash the body, floor, and other castings in warm water and dish detergent. A good lathering with dish detergent and a strong rinse will help prepare your kit for paint. Rinse the parts good and let them all dry while you pursue those other railroading tasks, or simply go about your life as the parts dry for a few days.



Al Westerfield Photograph





Now let's attach the grab irons to each side. This step will have a great impact on this kit's ultimate appearance as, instead of ladders, it has individual grabs serving as a ladder on the right end of each side. Making these grabs "appear" parallel is important to ending up with a good looking kit. Since you have already drilled the holes, the task at hand is to insert and then glue the provided wire grabs. Trim the provided wire grabs to shorten the wire to be inserted in the body. Leave them long enough so that part of them is visible from the inside of the one piece body. If you drop one, don't worry, the kit comes with extras. If you need more, you can buy Tichy Part #3015. Insert all of them on one side and then adjust them to be roughly parallel and a few scale inches off of the car body, then place a drop of ACC on the inside of the car body where the wire end sticks through. I use cheap hardware store ACC that is very thin and put a drop on a piece of glass, then apply it with a needle or pin. Less is more, as you want to put just enough adhesive to fill the gap

between the inside of the body. After they have had a few seconds to be secured by the ACC, adjust them to be more parallel. If needed, add a little more ACC to the wire and the hole in the resin. The ACC relies on the moisture in the air to cure, so a large drop only slows the bonding process and makes it a little weaker. If one (or two) is not working out, pull it out and put it in tomorrow after you have a fresh attitude. After they are dry, you get another chance to make adjustments to make them parallel. Don't expect this to work out the first time you try it (if it does, you are a natural and should proceed to building harder resin kits and write articles for *The B&O Modeler* immediately). Use a good set of needle nose pliers or tweezers to install and adjust the grabs. A good tool or two makes everything go better. This explains why there are tool vendors at train shows. Next time you get a chance, visit one and buy a good set of pliers and wire cutters. Good tools make this process more enjoyable.





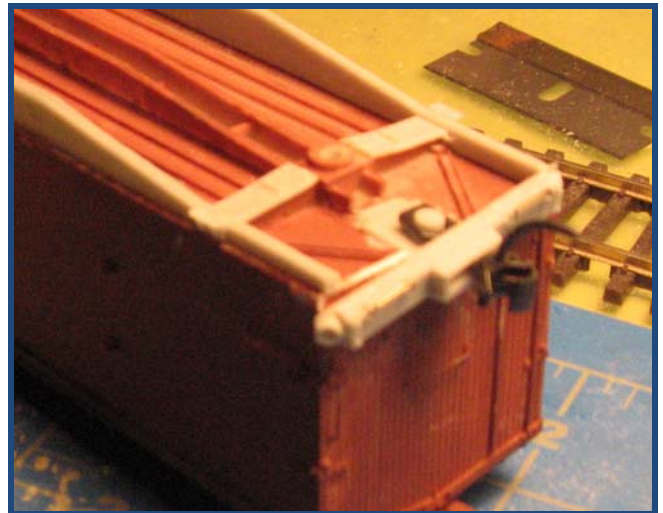
### Underframe

The underframe/floor casting of my kit was close to perfect fit, but I had to do some light sanding on the edges. (There are some less expensive brands of resin kits I have purchased at train shows that require a grinder to get close to fitting). This is a normal part of constructing a resin kit, lightly sanding parts to fit. Usually the parts have to be sanded at right angles, so I routinely use a piece of sandpaper taped to a piece of glass to sand edges of resin parts. While you are at the hardware store pick up a piece of 400 or 600 grit wet sandpaper. You can buy the same product at the hobby store for a few more dollars, but the key is to have a small piece of sandpaper taped to a very flat surface like a piece of glass to fine tune the edges of the kit.

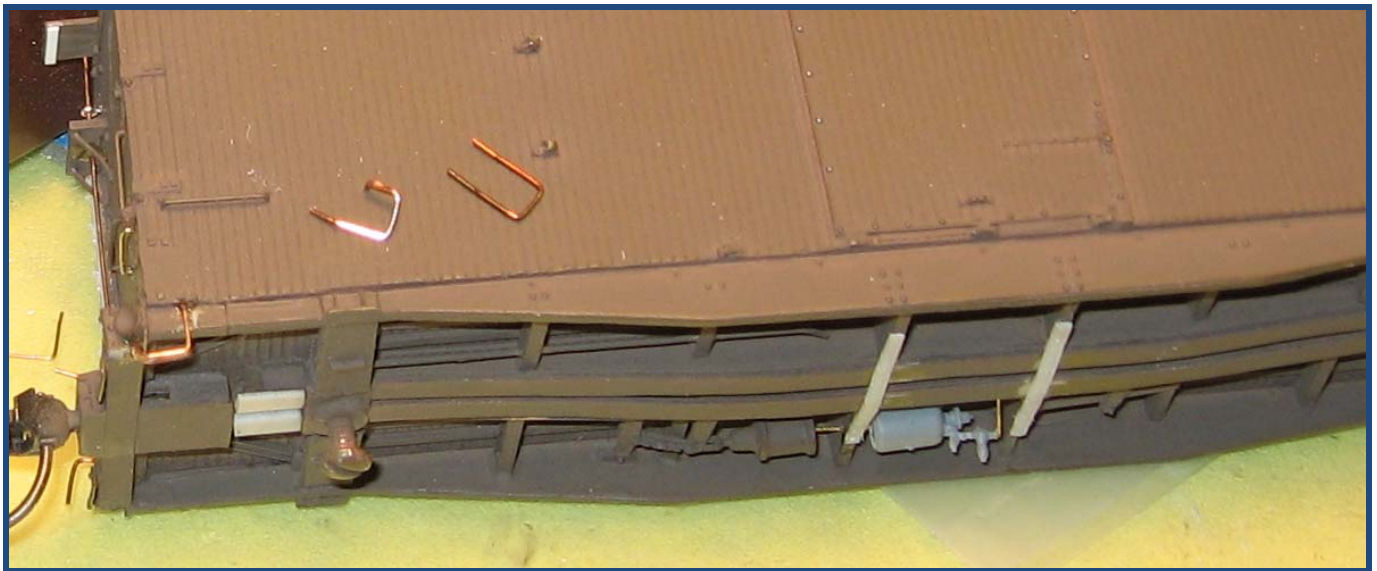
The next step is one of the trickier ones for this kit. That is fitting the side sills. The recessed tops of the side sills must be notched to fit over the ends. Then one must test their fit by using just enough glue to hold in place. If either doesn't fit and needs some sanding, the glue joints need to be broken and the floor removed in order to make it thinner. Do this for both sides before adding more glue to the joint to make it strong enough for service on your layout. At this point I sat the model to the side and worked on another project to let the glue dry thoroughly.

Following through the instructions I came to the next thing that was a little tricky. That was adding the couplers. I chose the venerable Kadee #5 coupler because this kit has coupler pockets cast in place for them. I could have also used a Kadee #58, which is

closer to scale size. If this assembly step gets too tedious, consider cutting the bottom out of the end sill casting below the coupler opening (see small photo), glue the end sill in place, then add the couplers in assembled boxes such as the Kadee #78.

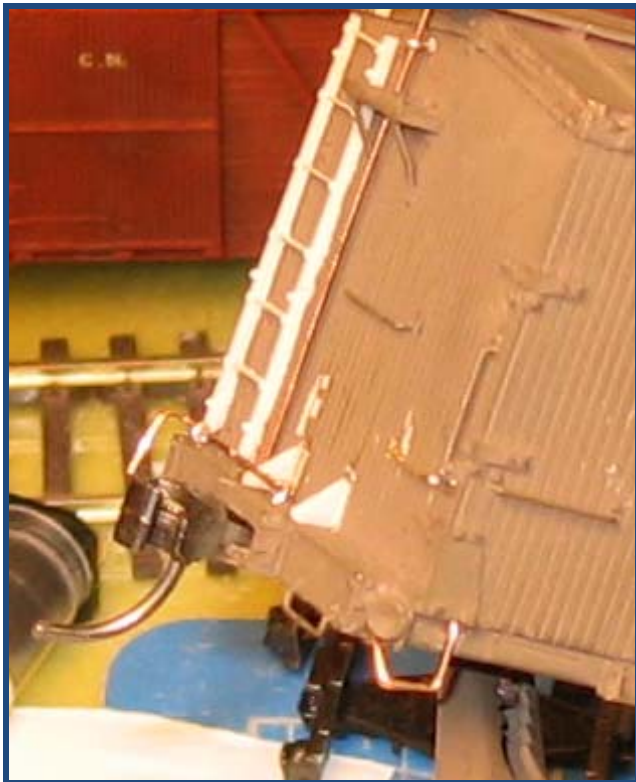






### Side Sill Steps

The instructions call for bending included brass strip to make the steps. I wanted the steps to be more strongly secured to the car body so I used A-line, Style A stirrup steps. These were bent and trimmed to resemble the steps shown in the prototype photographs. The longer end is inserted into a #76 hole drilled into the body casting just above the side sill. This gives the step a stronger mechanical connection to the model. Note that the step bent in the photo is the one for the other end of the car.



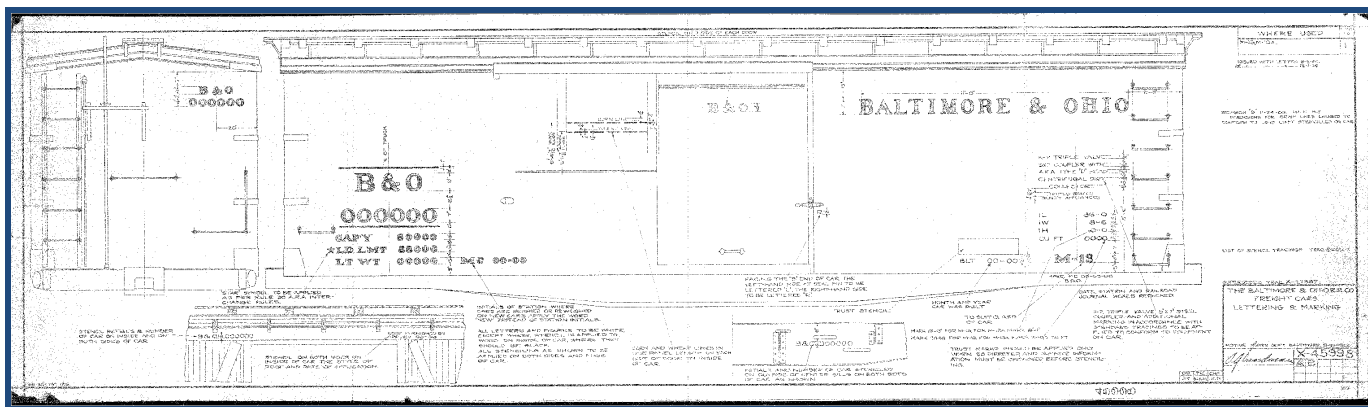
### Construction Conclusions

I did not cover all the assembly steps, just the ones I changed or thought might cause concern for those new to building resin kits. If you give this kit a try and have a question about a step, send me an email or send one to Al Westerfield, he is very helpful and supportive. If things like cut levers and full underbody detailing get too tedious, skip them. Enjoy the model and consider attempting some new details on your next effort. Use the KISS principle.

### Paint and Decaling

Painting a resin kit can be a stumbling block for many of us. Developing techniques with an airbrush takes some time, not to mention the expense of purchasing an airbrush. If you have enjoyed the experience to this point and want to consider an airbrush, look at the references included at the end of the article. One alternative to get started quickly is to use a can of spray paint, I did. For this model, try Floquil Boxcar Red, F130074, in the 3 oz spray can, [http://www.testors.com/catalog\\_item.asp?itemNbr=159](http://www.testors.com/catalog_item.asp?itemNbr=159). Spray several very light coats, keeping about ten inches away from the model and letting the previous coat dry before dusting it again. Weathering can be done by holding a spray can of Roof Brown (Floquil F130070) a few feet back from the model to create a light spray and give it a well worn look. Another technique to try is some weathering powders or some pastels applied with a soft brush, that's all I used on this lightly weathered car. Some modelers prefer to weather the model before decaling as the white lettering tends to stay bright while the rest of the car's paint tend to fade and show weather wear, something you might try.





1926 M-13 Lettering Diagram. B&ORRHS Collection

## Airbrush Information

Which airbrush is best? (2008). Retrieved March 27, 2008 from <http://www.craigcentral.com/models/ab.asp>.

8 ways to power your airbrush, (January 2001). *Finescale Modeler*. Retrieved March 27, 2008 from [www.finescale.com/fsm/objects/pdf/8wayspowerairbrush.pdf](http://www.finescale.com/fsm/objects/pdf/8wayspowerairbrush.pdf).

## Materials

A-Line:

#29000 Stirrup Steps, Style A

Floquil:

F130074, Boxcar Red Spray Paint

Kadee:

#501 Archbar Trucks

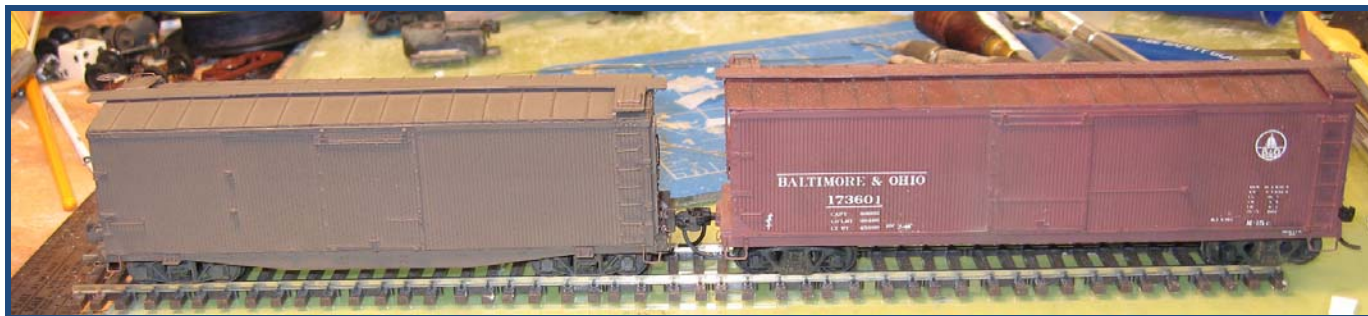
#5 Coupler

# 246 2-56 Tap and Drill Set

Testors:

Dullcote Lacquer

Glosscote Lacquer



Side by side with a longer M-15 Boxcar

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